

CLAIMS

What is claimed is:

1. A method for reusing timeslots designated for transmission of control information for user traffic, the method comprising the steps of:

identifying timeslots designated for transmission of control information within a wireless communication system;

allocating the timeslots designated for transmission of control information so that neighboring cells do not transmit control information in the same timeslot; and

reusing the timeslots designated for transmission of control information that are not being used for transmission of control information for user traffic.

2. The method of claim 1 wherein the timeslots designated for transmission of control information are Common Physical Channel (CPCH) timeslots.

3. The method of claim 1 further comprising the step of:

reducing the power with which a first cell reuses a CPCH timeslot for user traffic where the reuse causes degradation to CPCH reception in a second cell using said CPCH timeslot for transmission of control information.

4. The method of claim 2 wherein the first cell is identified as the cell causing degradation to CPCH reception in the second cell by locating an area within the second cell in which wireless transmit/receive units (WTRUs) have reported poor CPCH reception and poor CPCH reception in said area indicates interference from the second cell.

5. The method of claim 3 wherein cells other than the first cell that are not using the CPCH timeslot for transmission of control information reuse the CPCH timeslot for user traffic.

6. The method of claim 2 wherein a Primary Common Control Physical Channel (PCCPCH) is transmitted in the CPCH timeslots.

7. The method of claim 2 wherein a Secondary Common Control Physical Channel (SCCPCH) is transmitted in the CPCH timeslots.

8. A method for reusing Common Physical Channel (CPCH) timeslots for user traffic within a cell of a wireless communication system, the method comprising:

transmitting and receiving user traffic in CPCH timeslots that the cell is not using for transmission of control information.

9. A wireless communication system wherein timeslots designated for transmission of control information may be reused for user traffic, the system comprising:

a plurality of wireless transmit/receive units (WTRUs) configured to report performance measurements regarding the quality with which they receive control information;

at least one base station configured to receive the performance measurements provided by the WTRUs and obtain the location of each WTRU reporting the performance measurements; and

a radio network controller (RNC) configured to identify base stations whose reuse of timeslots designated for transmission of control information is degrading reception of control information at another base station and adjust the power with which said base stations are reusing said timeslots.

10. The wireless communication system of claim 9 wherein the RNC is configured to reduce the power with which a first cell reuses a CPCH timeslot for user traffic where the reuse causes degradation to CPCH reception in a second cell using said CPCH timeslot for transmission of control information.

11. The wireless communication system of claim 10 wherein the RNC identifies the first cell as the cell causing degradation to CPCH reception in the second cell by locating an area within the second cell in which WTRUs have reported poor CPCH reception wherein poor CPCH reception in said area indicates interference from the second cell.

12. The wireless communication system of claim 11 wherein the RNC allows cells other than the first cell that are not using the CPCH timeslot for transmission of control information to reuse the CPCH timeslot for user traffic.